

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 2001078748 A

(43) Date of publication of application: 27.03.01

(51) Int. Cl

C12M 1/34
C12N 11/14
C12Q 1/00

(21) Application number: 11254432

(22) Date of filing: 08.09.99

(71) Applicant: JAPAN ADVANCED INST OF SCIENCE & TECHNOLOGY HOKURIKU

(72) Inventor: TAMIYA EIICHI

(54) BIOSENSOR FOR MEASURING INFLUENCE ON METABOLIC ACTIVITY OF CELL

change of the light electromotive force before and after adding the substance to be examined.

(57) Abstract:

COPYRIGHT: (C)2001,JPO

PROBLEM TO BE SOLVED: To provide an apparatus for measuring metabolic activity of a cell.

SOLUTION: This biosensor is used for measuring influence of a substance to be examined on metabolic activity of a cell and the biosensor is equipped with a semiconductor layer 2, an insulating layer 3 laminated on a main face of the semiconductor 2, a live cell or a live cell group 4 which comes into contact with the insulating layer 3 and is arranged thereon, MIS structure comprising a culture solution layer 8 which immerses the live cell or the live cell group 4 and comes into contact with the insulating layer 3, a bias electrode means for applying bias voltage to the MIS structure, a light source means for irradiating controlled light to the MIS structure in order to generate light electromotive force in the MIS structure, a means for adding the substance to be examined to the culture solution layer 8 and a means for monitoring the change of light generated in the MIS structure, and the biosensor measures influence of the substance to be examined on metabolic activity of the cell from the

